

SABIC Innovative Plastics Valox® VX8015U PBT+PET (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , PBT + PET Blend, Glass Filled , Polyethylene Terephthalate (PET)

Material Notes:

VALOX VX8015U is a UV stabilized, 15% glass reinforced PBT+PET injection moulding resin with improved surface finish quality characteristics versus VALOX 815. This grade is 815 with improved gloss and improved UV performance. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-VX8015U-PBTPET-Europe-Africa-Middle-East.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|---|---|--|
| Density | 1.43 g/cc | 0.0517 lb/in ³ | ISO 1183 |
| Moisture Absorption at Equilibrium | 0.060 % | 0.060 % | 23 ^o C / 50% RH; ISO 62 |
| Water Absorption at Saturation | 0.26 % @Temperature 23.0 ^o C | 0.26 % @Temperature 73.4 ^o F | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0040 - 0.0080 cm/cm | 0.0040 - 0.0080 in/in | on tensile bar; SABIC Method |
| Linear Mold Shrinkage, Transverse | 0.0060 - 0.010 cm/cm | 0.0060 - 0.010 in/in | on tensile bar; SABIC Method |
| Melt Flow | 12 g/10 min @Load 1.20 kg, Temperature 265 ^o C | 12 g/10 min @Load 2.65 lb, Temperature 509 ^o F | [cm ³ /10 min] Melt Volume Rate; ISO 1133 |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|---|---|---------------------|
| Hardness, Rockwell R | 119 | 119 | ISO 2039-2 |
| Hardness, H358/30 | 101 MPa | 14600 psi | ISO 2039-1 |
| Tensile Strength at Break | 90.0 MPa | 13100 psi | 5 mm/min; ISO 527 |
| Elongation at Break | 3.0 % | 3.0 % | 5 mm/min; ISO 527 |
| Tensile Modulus | 6.00 GPa | 870 ksi | 1 mm/min; ISO 527 |
| Flexural Strength | 135 MPa | 19600 psi | 2 mm/min; ISO 178 |
| Flexural Modulus | 5.00 GPa | 725 ksi | 2 mm/min; ISO 178 |
| Izod Impact, Notched (ISO) | 5.00 kJ/m ² @Temperature -30.0 ^o C | 2.38 ft-lb/in ² @Temperature -22.0 ^o F | 80*10*4; ISO 180/1A |

| Mechanical Properties | Metric | English | Comments |
|--------------------------------|--|---|--|
| | 6.00 kJ/m ² @Temperature 23.0 Â°C | 11.9 ft-lb/in ² @Temperature 73.4 Â°F | 80*10*4; ISO 180/1A |
| Izod Impact, Unnotched (ISO) | 25.0 kJ/m ² @Temperature 23.0 Â°C | 11.9 ft-lb/in ² @Temperature 73.4 Â°F | 80*10*4; ISO 180/1U |
| | 25.0 kJ/m ² @Temperature -30.0 Â°C | 11.9 ft-lb/in ² @Temperature -22.0 Â°F | 80*10*4; ISO 180/1U |
| Charpy Impact Unnotched | 3.00 J/cm ² @Temperature 23.0 Â°C | 14.3 ft-lb/in ² @Temperature 73.4 Â°F | Edgew 80*10*4 sp=62mm; ISO 179/1eU |
| | 3.00 J/cm ² @Temperature -30.0 Â°C | 14.3 ft-lb/in ² @Temperature -22.0 Â°F | Edgew 80*10*4 sp=62mm; ISO 179/1eU |
| Charpy Impact, Notched | 0.400 J/cm ² @Temperature -30.0 Â°C | 1.90 ft-lb/in ² @Temperature -22.0 Â°F | V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA |
| | 0.500 J/cm ² @Temperature 23.0 Â°C | 2.38 ft-lb/in ² @Temperature 73.4 Â°F | V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA |
| | 0.600 J/cm ² @Temperature 23.0 Â°C | 2.86 ft-lb/in ² @Temperature 73.4 Â°F | ISO 179/2C |
| | 0.600 J/cm ² @Temperature -20.0 Â°C | 2.86 ft-lb/in ² @Temperature -4.00 Â°F | ISO 179/2C |
| Taber Abrasion, mg/1000 Cycles | 17 @Load 1.00 kg | 17 @Load 2.20 lb | CS-17; SABIC Method |

| Thermal Properties | Metric | English | Comments |
|------------------------------------|---|--|------------------------------|
| CTE, linear, Parallel to Flow | 55.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C | 30.6 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F | ISO 11359-2 |
| CTE, linear, Transverse to Flow | 85.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C | 47.2 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F | ISO 11359-2 |
| Deflection Temperature at 0.46 MPa | 215 Â°C | 419 Â°F | Edgew 120*10*4 sp=100mm; ISO |

| Thermal Properties | Metric | English | Comments |
|---|------------------------------|---------------------------------|--|
| Deflection Temperature at 1.8 MPa (264 psi) | 175 °C | 347 °F | Edgew 120*10*4 sp=100mm; ISO 75/Ae |
| Vicat Softening Point | 200 °C | 392 °F | Rate B/50; ISO 306 |
| | 213 °C | 415 °F | Rate B/120; ISO 306 |
| | 220 °C | 428 °F | Rate A/50; ISO 306 |
| Flammability, UL94 | HB @Thickness 1.60 mm | HB @Thickness 0.0630 in | UL 94 by SABIC-IP |
| Glow Wire Test | 750 °C @Thickness 1.00 mm | 1380 °F @Thickness 0.0394 in | Glow Wire Flammability Index; IEC 60695-2-12 |

| Electrical Properties | Metric | English | Comments |
|-----------------------|-------------------------------------|-------------------------------------|-------------------------|
| Volume Resistivity | >= 1.00e+15 ohm-cm | >= 1.00e+15 ohm-cm | IEC 60093 |
| Surface Resistance | >= 1.00e+15 ohm | >= 1.00e+15 ohm | ROA; IEC 60093 |
| Dielectric Constant | 2.9 @Frequency 1.00e+6 Hz | 2.9 @Frequency 1.00e+6 Hz | IEC 60250 |
| | 3.0 @Frequency 50.0 - 60.0 Hz | 3.0 @Frequency 50.0 - 60.0 Hz | IEC 60250 |
| | 3.6 @Frequency 100 Hz | 3.6 @Frequency 100 Hz | IEC 60250 |
| Dielectric Strength | 16.0 kV/mm @Thickness 3.20 mm | 406 kV/in @Thickness 0.126 in | in oil; IEC 60243-1 |
| | 18.0 kV/mm @Thickness 1.00 mm | 457 kV/in @Thickness 0.0394 in | short time; IEC 60243-1 |
| | 24.0 kV/mm @Thickness 1.60 mm | 610 kV/in @Thickness 0.0630 in | in oil; IEC 60243-1 |
| | 30.0 kV/mm @Thickness 0.800 mm | 762 kV/in @Thickness 0.0315 in | in oil; IEC 60243-1 |
| Dissipation Factor | 0.0010 @Frequency 50.0 - 60.0 Hz | 0.0010 @Frequency 50.0 - 60.0 Hz | IEC 60250 |

| Electrical Properties | 0.0020 Metric | 0.0020 English | Comments IEC 60250 |
|----------------------------|--------------------------|--------------------------|-----------------------|
| | @Frequency 100 Hz | @Frequency 100 Hz | |
| | 0.014 | 0.014 | IEC 60250 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| Comparative Tracking Index | >= 175 V | >= 175 V | IEC 60112 |
| | 325 V | 325 V | IEC 60112 |

| Descriptive Properties | Value | Comments |
|-------------------------------------|--------|----------------|
| Ball Pressure Test, 125Å°C +/- 2Å°C | PASSES | IEC 60695-10-2 |

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